

Name: Theresa Law	Grade Level: Second Grade
Lesson Topic: Observing Brassica Plants: Compost Soil versus Regular Soil	
Content : Students will observe and record the effects of worm compost on the germination of Brassica seeds and the growth of the plants	
Materials: <ul style="list-style-type: none"> • Rulers • Connecting Cubes will use as a tool to measure height • Magnifying glasses • 'Plants in Compost' Worksheet • Science Notebook 	
Learning Background <ul style="list-style-type: none"> • Students have learned that much of the materials people throw away can be reuse, composted, or recycled and anything is that biodegradable can be compost • Students understand what compost is and how to make their own. • Students understand the benefits of reusing materials. Instead of using materials provided by Foss <div> </div> <p>Kit, they are using plastic water bottles as planters</p>	
Lesson Objectives: <ul style="list-style-type: none"> • Students will learn how plants benefit from compost soil 	
Skills/Strategies <ul style="list-style-type: none"> • Observe and describe how plants grow LE 2.1 a • Observe plant life cycles and life spans LE 4.1a,b,c,d • Observe that plants reproduce from: seeds, bulbs and cuttings LE 4.1 a,b,d • Observe that plants respond to changes in their environment LE 5.2a <p>DANIELSON FRAMEWORK: 1d Demonstrating Knowledge of Resources 3C Engaging Students in Learning</p>	Students will be expected to know: <ul style="list-style-type: none"> • the benefit of compost and the uses of compost: <ol style="list-style-type: none"> 1. compost increase the soil's ability to hold water 2. help soil to achieve good airflow 3. adds nutrients for plants <p>Key terms/Vocabulary</p> <ul style="list-style-type: none"> • compost • food scraps • germination • nutrients • data
Hands-on Activity: <ul style="list-style-type: none"> • Students will measure the growth of Brassica Plants and record their observations. 	
Lesson Outline: <ul style="list-style-type: none"> • Briefly review of what the students have done so far: <p><i>Day 1</i> Analyzed Brassica seeds</p> <p><i>Day 2</i> Planted Brassica seeds in three separate planters: Planter #1: soil provided by Foss Kit; Planter #2 a mixture of compost soil and Foss Kit soil; Planter #3 Compost Soil</p> 	

Day 3 Hypothesized how the soil from Foss Kit and soil from compost will affect the plant's growth, "Which soil mix will sprout the most seeds? Which will grow the fastest? Why?"

- Teacher say " One week has passed we are going to work with our partners and observe our plants"
- Students work with their partners and examine the progress of the seeds, sprouts, or plants-- depending when the seeds germinate. They will use rulers and connecting cubes to measure the growth
- Students will complete individual worksheet; recording the numbers of seeds sprouted and growth
Below is a sample what the worksheet will look like

Sprouting	Date	Number of Seeds Sprouted
Foss Kit Soil		
Compost mix with Foss Kit Soil		
Compost Soil		

Growth Observation 1	Date	Height
Foss Kit Soil		
Compost mix with Foss Kit Soil		
Compost Soil		

Growth Observation 2	Date	Height
Foss Kit Soil		
Compost mix with Foss Kit Soil		
Compost Soil		

- In their science notebooks, students will sketch a picture of the plants in their notebooks
- They will continue to measure the height of the plants and record any new data every few days.
- After three weeks, students will examine the data they have gather and answer the following questions in their science notebooks: Which planter grew the tallest plants? Which one looks the healthiest? Why?

Assessment Method

When reading students' reflections, I will use a checklist

Name	Explain why the two Brassica plants look different	List 2+ reasons why compost is good for plants
Anna	✓	✓
Brian		

Conclusion

- Students will share their observation with the class
- Homework Assignment: Share with one family member what they learned today in our Brassica Project
- Students will continue to observe the Brassica plants as they grow flowers/seedpods

Take Home Activity

- Students can take the seeds from Brassica's seedpods and replant them in their own home; reusing plastic water bottlers as planter. They will given a ziploc bag of compost soil as well.